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# Spatial Structure of the Decapeptide Val-Ile-Lys-Lys-Ser-Thr-Ala-Leu-Leu-Gly in Water and in a Complex with Sodium Dodecyl Sulfate Micelles

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## Abstract

We have studied the spatial structure of the decapeptide Val-Ile-Lys-Lys-Ser-Thr-Ala-Leu-Leu-Gly in aqueous solution and in a complex with sodium dodecyl sulfate (SDS) micelles by 1H nuclear magnetic resonance (NMR) spectroscopy and two-dimensional (2-D) NMR spectroscopy (total correlation spectroscopy and nuclear Overhauser effect spectroscopy (NOESY)). The approach used to determine the decapeptide spatial structure was based on analysis of the 1H-13C residual dipolar couplings in the molecules partially aligned in lyotropic liquid crystalline media. Analysis of the interproton distances obtained from the 2-D NOESY NMR spectrum was used to reveal the spatial structure of the decapeptide in a complex with SDS micelles. Complex formation was confirmed by analysis of 1H chemical shifts in the NMR spectrum of the decapeptide and analysis of the signs and values of NOEs in a solution with SDS micelles. 

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